Innovation and Science

ACCOUNTABILITY STATEMENT

This Business Plan for the three years commencing April 1, 2001 was prepared under my direction in accordance with the *Government Accountability Act* and the government's accounting policies. All of the government's policy decisions as at April 3, 2001 with material economic or fiscal implications of which I am aware have been considered in preparing the Business Plan.

The Ministry's priorities outlined in the Business Plan were developed in the context of the government's business and fiscal plans. I am committed to achieving the planned results laid out in this Business Plan.

[ORIGINAL SIGNED]

Victor Doerksen, FCGA, *Minister of Innovation and Science*
April 10, 2001

OUR VISION

Alberta will be recognized locally and globally as a world leader in the development and application of science and technology that improves the well being and prosperity of its people and improves its communities and natural environment.

OUR MISSION

To enhance the contribution of science, research, and information and communications technology to the sustainable prosperity and quality of life of all Albertans.

OUR CORE BUSINESSES

1. **Science, Research and Development**

   Science, Research and Development involves:

   - providing strategic leadership for science and research in Alberta,
   - managing and funding strategic investments in science and research,
   - co-ordinating government science and research,
   - promoting a science culture in Alberta,
   - applying science and research to improve stewardship of our resources and environment,
   - commercializing the results of research,
   - developing the "knowledge industry" component of the Alberta economy, and
   - increasing the application of technology throughout the economy.

2. **Government Information Technology**

   Government Information Technology involves:

   - ensuring that the Government of Alberta is exemplary in the efficient and effective use of information and information and communications technology (ICT) in providing services to all Albertans,
   - co-ordinating the effective use of computer technology, voice and data networks, and information systems within government,
   - establishing cross ministry policies and standards for ICT to improve the efficiency and flexibility of government,
   - identifying, facilitating and providing cross-department solutions for ICT, and
   - identifying and promoting best practices through cross ministry initiatives.

STRATEGIC DIRECTION

Innovation and Science is all about strengthening the Alberta Advantage. This will be accomplished through a strong innovation system that includes not only research and development (R&D), but also the dissemination, commercialization, and application of knowledge and technology.

Innovation and Science is one member of a network of organizations that support the innovation system. Other levels of government and the universities are major players in the innovation system. A large role is also played by private sector enterprises by converting technology into products and services that produce socio-economic benefits for Albertans.

ALBERTA SCIENCE AND RESEARCH AUTHORITY (ASRA)

In 1994, the provincial government created the Alberta Science and Research Authority (ASRA). ASRA is a publicly appointed board of Albertans who are recognized provincially, and in many cases, nationally and internationally, as leaders in the areas of science, research and technology. The role of the Authority is to advise government respecting science, engineering and technology that affect resources or industry in Alberta and to make strategic investments in the areas of R&D and science and technology.

In addition to investing in research, ASRA is helping to lay the groundwork for a stronger economy and brain gain. The Board provides an all-encompassing view on what we need to help prepare our province, our economy and our people for the future. One example of this is *Sustaining the Alberta Advantage.* This key strategy document was presented by ASRA in September 1997 and included recommendations in relation to the new economy. Many of these recommendations have been acted on and incorporated into the initiatives of several government ministries.

Strategic priorities set for the Ministry of Innovation and Science by ASRA for 2001-2004 include life sciences (agriculture, forestry, health and biotechnology research), ICT, and energy. Across each of these priorities is a focus on education, public relations and stewardship issues.

RESEARCH INSTITUTES

ASRA's organizational structure includes three unincorporated boards that advise ASRA on its strategic mandate:

- Alberta Agricultural Research Institute (AARI)
- Alberta Energy Research Institute (AERI)
- Alberta Forestry Research Institute (AFRI)

Alberta Agricultural Research Institute (AARI)

AARI's strategic direction was developed in support of the Ag Summit 2000 Industry Vision: *To create a collaborative environment which supports continued growth of a healthy, productive and sustainable agri-food industry in Alberta.*

AARI will provide leadership to:

- improve the R&D system, by facilitating the development of industry-wide collaborative and complementary research activities, and
- substantially increase focus on strategic funding initiatives in life sciences, value-added processing, and environmental sustainability.

AARI provides advice to ASRA and the Minister regarding information and research on science, engineering and technology related to the agri-food industry.

Alberta Energy Research Institute (AERI)
Alberta is blessed with abundant energy resources including hydrocarbons (oil, natural gas, coal) and renewable energy (biomass, hydro, wind and solar). Advanced technology is an essential factor enabling the entire energy sector. The role of AERI, through ASRA, is to invest in research for technology to enhance the sustainable development of Alberta's energy resources. AERI provides advice to ASRA and the Minister regarding information and research on science, engineering and technology related to energy.

Alberta Forestry Research Institute (AFRI)
This institute will be established to provide advice to ASRA and the Minister on science, engineering and technology related to forestry, ultimately contributing to the conservation and sustainable management of Alberta's forest resources.

PROVINCIAL CORPORATIONS

Also part of ASRA's corporate structure are two provincial corporations (wholly owned subsidiaries of ASRA), the Alberta Research Council Inc. (ARC) and iCORE Inc. (Informatics Circle of Research Excellence Inc.).

ALBERTA RESEARCH COUNCIL INC. (ARC)

ARC conducts its activities in three areas: public good; technology development and commercialization; and contract R&D.

ARC's public good activities are aligned with ASRA's strategic themes of life sciences, energy and ICT in areas where industry is unable or unwilling to invest due to higher risk and longer term or widely dispersed benefits.

ARC also assists in technology development and commercialization in early stage and start-up enterprises to move technology from concept to prototype and, ultimately, to viable business operations.

ARC's contract R&D activities attract and encourage industrial research and development to Alberta and enable Alberta industries to compete successfully in the global market through the application of new technologies.

iCORE INC. (INFORMATICS CIRCLE OF RESEARCH EXCELLENCE)

The mandate of iCORE is to attract and grow a critical mass of leading researchers in the fields of computer science, electrical and computer engineering, and other ICT-related disciplines. iCORE is also exploring ways to support current ICT research faculty and graduate students at Alberta universities.

DEPARTMENT OF INNOVATION AND SCIENCE

Innovation and Science is unique in its organizational make-up. Department staff work closely with advisory boards whose representatives come from the private sector and academia. This structure allows for increased integration and efficiency of government research and development investments, technology commercialization and development of knowledge industries.

Innovation and Science, through the Office of the Chief Information Officer (CIO), also provides leadership and focus to the planning and implementation of information technology initiatives to support the government's vision of being a model user of technology in serving Albertans. This includes leadership for the development of cross ministry information technology policies, standards, security frameworks and technical infrastructure, as well as ensuring that ministry technology plans and initiatives align with corporate plans and directions. The CIO Office is also responsible for the implementation of an integrated financial and human resource system through the IMAGIS team.

Innovation and Science is responsible for management of the SUPERNET project. A consortium led by Bell Intrigna will implement a province-wide network that will provide high-speed connection to every learning institution, library, government facility and hospital. As well, in 422 communities, high-speed network bandwidth will be provided to service suppliers at city rates. In these communities high-speed Internet services will also be made available to residences at rates comparable to those in urban centers.

LINKAGES TO GOVERNMENT'S CORE BUSINESSES

Innovation and Science, in conjunction with other government ministries, will continue to implement the Economic Development Strategy and the Corporate Information Management/Information Technology Strategy.

Innovation and Science works co-operatively with government ministries and agencies within the Alberta Government and other levels of government to ensure the development and implementation of:

- Corporate Information Management/Information Technology Strategy
- Climate Change Strategy with: Environment, Agriculture, Food and Rural Development, Energy, and the ARC
- Western Economic Partnership Agreement with the Federal Government
- Alberta One-Window Initiative with all ministries
- Aboriginal Policy Initiative with Aboriginal Affairs and Northern Development.

Science, research, and ICT contribute to each of the following core businesses identified within the Alberta Government's Business Plan:

PEOPLE

The well being of Albertans will be sustained through the innovative application of knowledge and technology.

PROSPERITY

Alberta's economy will be sustainable and competitive through innovation, creation and use of knowledge and technology.

PRESERVATION

The well being of Alberta's communities and natural environment will be sustained through the application of knowledge and technology.

102-03670/

CORE BUSINESS: SCIENCE, RESEARCH AND DEVELOPMENT

- Providing strategic leadership for science and research in Alberta
- Managing and funding strategic investments in science and research
- Co-ordinating government science and research
- Increasing the application of technology throughout the economy

GOAL 1: MAXIMIZE THE INTERNATIONAL COMPETITIVENESS OF ALBERTA'S SCIENCE AND RESEARCH SYSTEM.

A strong science and research system relies on quality people, quality research, quality infrastructure and financial investment.

STRATEGIES	KEY PERFORMANCE MEASURES

Quality People – Quality Research

- Attract and grow a critical mass of outstanding researchers in the fields of computer science, electrical and computer engineering, physics, mathematics and other ICT-related disciplines.
- Maintain and enhance faculty and graduate student quality and research excellence at universities and teaching hospitals. Support graduate students through project and program funding.
- Provide leadership and advocacy in working with Alberta universities to maximize the return on the public's investment in research, and to promote research excellence.
- Build networks among universities, government and industry to facilitate science and research efforts.

Quality Infrastructure

- Make strategic investments through the Innovation and Science Research Investments (ISRI) program to enhance key research activities and infrastructure at Alberta universities, research hospitals, and other research organizations.
- **SUPERNET** - Form a strategic alliance with the private sector to develop and implement a network that will make high-speed telecommunications access available province-wide, at competitive urban rates.

Financial Investment

- Increase Alberta's ability to attract R&D investment from private, public, national and international sources.

Quality People – Quality Research

Measures

Alberta ICT Advantage

The Industrial Age has given way to the Information Age, and advancements in information and communications technologies are providing new economic opportunities. With the proper use and encouragement of ICT, Alberta can seize the opportunity to become more productive and competitive in the global economy.

NUMBER OF PEOPLE EMPLOYED IN THE ICT SECTOR

	1999 Actual	2000 Target	2000 Actual	2001 Target	2002 Target	2003 Target	2004 Target	2005 Target
Number of ICT Workers in Alberta	50,300 ICT workers	55,300 to 60,300 ICT workers	53,700 ICT workers	5,000 to 10,000 new jobs	5,000 to 10,000 new jobs	5,000 to 10,000 new jobs	5,000 to 10,000 new jobs	85,300 ICT workers

Source for Actual: Statistics Canada - Labour Force Survey

Financial Investment

Supplementary Measure

R&D Investment in Alberta by Source (Federal, Provincial, Business)

In an "innovation-based economy", investment in science and R&D is the primary driver of business growth and success. Target (as identified in *Get Ready Alberta*): $2 billion total R&D investment from the province, Federal Government and business by 2005.

CORE BUSINESS: SCIENCE, RESEARCH AND DEVELOPMENT

- Commercializing the results of research
- Developing the "knowledge industry" component of the Alberta economy
- Increasing the application of technology throughout the economy

GOAL 2: PROMOTE EFFECTIVE TECHNOLOGY COMMERCIALIZATION, ADOPTION, AND INVESTMENT IN ALBERTA.

Alberta will reap significant gains from being a preferred location for technology commercialization, adoption of science and technology, investment in R&D, and investment in technology business.

STRATEGIES

- Increase commercialization and application of the results of R&D in Alberta by developing and promoting the network of University Technologies International (UTI), the Industry Liaison Office (ILO) and the ARC to actively encourage more companies to adopt new technologies.
- Facilitate a stronger, more collaborative technology commercialization network within Alberta.
- Attract and grow people in management of biotechnology research organizations.
- Form collaborative international agreements in R&D and technology commercialization.
- Support research and technology development initiatives important to future economic development and sustainability.
- Develop and implement, in conjunction with Alberta Economic Development, a promotional package on the Alberta Advantage aimed at attracting key business opportunities and venture capital investments to Alberta.
- Promote adoption of new knowledge and technology by commercializing research in existing and emerging industries.
- Encourage the direct application of new knowledge and research in relevant public and private organizations.
- Encourage the dissemination of new R&D advances through the Enabling Research and Technology Transfer stream of the ISRI program.
- Establish a community involvement program to ensure that maximum benefits are achieved from the SUPERNET infrastructure that is being put in place (refer to Goal 1).

KEY PERFORMANCE MEASURES

Measures

High-Speed Network Access

Through the SUPERNET, we will make high-speed network and Internet access available, province-wide, at competitive urban rates within three years. In every community with at least one learning institution, library, or health facility, high-speed Internet access will be available to the public at competitive urban rates, while high-speed network services will be available to businesses at competitive urban rates. This initiative provides the infrastructure supporting the expansion of a knowledge-based economy and the opportunities that accompany it.

PERCENTAGE OF LEARNING INSTITUTIONS CONNECTED TO A HIGH-SPEED NETWORK

Learning Institutions	2000 Estimate*	2001 Target	2002 Target	2003 Target	2004 Target
Kindergarten to Grade 12*	16	30	50	75	100
University/College	14	20	60	80	100

Source: Alberta School Jurisdictions and post-secondary institutions.

* Currently, 100% of schools who wanted to connect to the Internet have been connected as a result of a provincial program or through local school jurisdiction initiatives. Our 2000 Estimate reflects only the percentage of learning institutions with a high-speed connection (10 Mbs or more).

Economic Impact on Alberta

The following performance measures are reported on by the ARC.

ALBERTA RESEARCH COUNCIL PERFORMANCE MEASURES

	1998-99 Actual	1999-2000 Actual	2000-01 Target	2001-02 Target	2002-03 Target	2003-04 Target
Economic Impact ($ millions)	143	167	180	190	200	220
Job Creation (direct jobs)	712	807	810	830	860	890
Commercialization Revenues ($ millions)	1.7	1.7	3.4	7.2	10.1	14.9
Customer Satisfaction	96.6%	97.0%	97.5%	97.8%	98%	98%

Source: Alberta Research Council Inc.

CORE BUSINESS: SCIENCE, RESEARCH AND DEVELOPMENT

- Providing strategic leadership for science and research in Alberta
- Managing and funding strategic investments in science and research
- Co-ordinating government science and research
- Applying science and research to improve stewardship of our resources and environment
- Increasing the application of technology throughout the economy

GOAL 3: PROMOTE EFFECTIVE APPLICATION OF SCIENCE AND RESEARCH FOR IMPROVING THE STEWARDSHIP OF ALBERTA'S RESOURCES AND ENVIRONMENT.

Stewardship involves the use, growth and sustainable development of our resources and environment.

STRATEGIES	KEY PERFORMANCE MEASURES
• Fund R&D that leads to enabling technologies for economic and sustainable development of Alberta's natural resources. • Continue to work on Greenhouse Gas management through Climate Change Central (with Environment, Energy, Agriculture, Food and Rural Development and ARC). • Build partnerships to stimulate research on Alberta's energy resources in addition to oil sands.	*Measure* **Development of Renewable Resource Technologies** This measure includes initiatives in fossil fuels, agriculture and forestry, supporting technology and public good.

ARC GROWTH IN SPENDING ON GREENHOUSE GAS STRATEGIC INITIATIVE

	1999-2000 Actual	2000-01 Actual	2001-02 Target	2002-03 Target	2003-04 Target
Total Spending ($ thousands)	679	984	1,000	1,180	810
Total Contract Revenue ($ thousands)*	1,918	2,523	4,698	9,575	12,110
Number of Projects	21	34	33	33	33
Number of Partners	45	50	55	60	65
Total ARC Persons Involved**	10.2	14.7	14.9	22.1	25

Source: Alberta Research Council Inc.

* Includes consortium projects where ARC is the Program Manager/Coordinator.

** Full-time Equivalent.

CORE BUSINESS: SCIENCE, RESEARCH AND DEVELOPMENT

- Promoting a science culture in Alberta
- Managing and funding strategic investments in science and research
- Increasing the application of technology throughout the economy

GOAL 4: PROMOTE THE BENEFITS OF SCIENCE AND INNOVATION WITHIN ALBERTA.

We want Albertans to understand the importance of science and research to their long-term prosperity and quality of life and support government investment in science and research.

STRATEGIES	KEY PERFORMANCE MEASURES

- Create a communications and marketing campaign around the Alberta SUPERNET initiative to educate Albertans and strengthen the "culture of use" of the Internet and related technologies.
- Increase the awareness and promotion of science and technology to K-12 students so that they will consider science and technology as a viable career opportunity (e.g., Science and Technology Week activities).
- Through the Science Awareness and Promotion stream of the ISRI program, expand the familiarity of Albertans with science and research.
- Develop and implement a communication plan for science awareness, literacy, and benefits of science and innovation.
- Work with provincial science, research, education and technology organizations to:
  - enhance the science culture and literacy within the province
  - improve cost effectiveness and delivery of programs and services
  - retain and increase industry support for research
  - promote increased application of research results by producers, processors, policy makers and the general public.
- Develop a web-based database and annual directory of all science awareness and education organizations and activities across the province to be used as a resource for schools, families and individuals.

Measures

Collect data on student's perceptions of science and technology as a career choice. Determine baseline. (Develop survey with Learning, Alberta Universities and the Statistics branch of Alberta Finance.)

Collect data on public perception of the benefits of science and innovation. Determine baseline. (Develop survey with Population Research Lab (U of A) and in consultation with the Statistics branch of Alberta Finance.)

Science Awareness

There is increasing evidence that expertise in mathematics and sciences will not keep pace with the demands anticipated in the 21st century. Knowledge in these areas will be a pre-requisite for high status and well-paid jobs in a technologically advanced workforce.

To ensure that Alberta has an "innovation-based" workforce, it is important that school aged students and young adults are aware of the opportunities particularly in the fields of science, technology and engineering. These fields are clearly linked to national-level growth and change and serve to drive and dominate social and economic trends.

The Ministry of Innovation and Science has been working with partners such as the University of Calgary and the Science Alberta Foundation to foster a culture of knowledge and innovation throughout the province. This new measure shows the amount of ASRA spending on science awareness/education. This measure will be further developed in conjunction with the other two measures proposed for this goal: Student Perceptions of Science and Technology as a Career Choice, and Public Perceptions of the Benefits of Science and Innovation.

ASRA SPENDING ON SCIENCE AWARENESS/EDUCATION* (DOLLARS)

Project Name	Research Organization	1999-2000 Actual	2000-01 Target	2001-02 Target	2002-03 Target	2003-04 Target
Science 2010 Computers	Edmonton Space and Science Centre	100,000	—	—	—	—
Science Education Outreach	Science Alberta Foundation and Alberta Science Literacy Assoc.	270,000	—	—	—	—
Scibermentor	University of Calgary	—	60,000	60,000	60,000	—
Knowledge Community	The Galileo Educational Network Assoc. (U of C)	200,000	200,000	200,000	—	—
Science Alberta Foundation	Science Alberta Foundation	750,000	1,300,000	1,300,000	1,300,000	1,300,000
Unallocated		—	60,000	90,000	390,000	500,000
Totals		1,320,000	1,620,000	1,650,000	1,750,000	1,800,000

Source: Innovation and Science, *Strategic Investment Report*

*Grants are distributed as one-time payments or over the course of several years.

CORE BUSINESS: GOVERNMENT INFORMATION TECHNOLOGY

- Ensuring that the Government of Alberta is exemplary in the efficient and effective use of information, and information and communications technology (ICT) in providing services to all Albertans
- Co-ordinating the effective use of computer technology, voice and data networks, and information systems within government
- Establishing cross ministry policies and standards for ICT to improve the efficiency and flexibility of government
- Identifying, facilitating and providing cross ministry solutions for ICT
- Identifying and promoting best practices through cross ministry initiatives

GOAL 5: THE GOVERNMENT OF ALBERTA WILL BE A MODEL USER IN THE APPLICATION OF INFORMATION, KNOWLEDGE AND TECHNOLOGY.

Achieve the effective use of information, and information and communications technologies to enhance government program delivery.

STRATEGIES	KEY PERFORMANCE MEASURES
Strengthen the governance and accountability framework • Implement corporate frameworks for accountability and governance in information management and information technology (IMT). **Achieve results through effective management of investments** • Implement a corporate framework to manage investments in technology and telecommunications. • Implement a corporate framework for managing performance of the ICT infrastructure. **Adopt standards and best practices across government** • Research, adopt, promote and set standards for the application and use of ICT. • Standardize and consolidate the different server environments that exist throughout government to optimize the corporate technology infrastructure. • Establish an Information Protection Centre to improve network security practices and respond to security incidents government-wide. • Identify opportunities in IMT for shared service approaches, standards (e.g. common platform and tools), best practices and cross ministry initiatives to reduce duplication of effort/investment and collaborate with ministries to implement solutions. • Lead government in the planning, standardization and ongoing development of a compatible, secure infrastructure for information management and ICT. • Identify and adopt a government-wide IMT Enterprise Architecture and toolset for standard deployment and management of IT assets.	*Measures* **IMT Alignment** The degree of IMT alignment with major corporate IMT directions and initiatives will be measured through a review of ministry plans. The Office of the CIO will base the review on formal education criteria. Percentage of Ministries Aligned 1999-2000 Actual: Not available 2000-01 Baseline: Baseline being developed 2001-02 Target: 80 2002-03 Target: 90 2003-04 Target: 95 **Source:** Innovation and Science, Office of the CIO

STRATEGIES	KEY PERFORMANCE MEASURES

Expand access to information and services

- Develop an E-Government and E-Commerce strategy for delivering services and conducting business electronically, addressing business, technical, legislative and policy requirements.
- Provide a corporate technology infrastructure to enable completion of the Alberta One-Window Initiative. This initiative will offer secure electronic access to the portfolio of services provided by the government.
- Implement an integrated financial and human resources system (IMAGIS) which supports the optimization of PeopleSoft applications and improves the overall efficiency and effectiveness of financial and human resource processes.

Take advantage of the strategic value of information

- Develop an information management framework in conjunction with Government Services.
- Develop an Electronic Document Management Strategy to support the management of documents across the Alberta government and to support ministry initiatives.

Invest in SUPERNET infrastructure

- Develop and implement an open, competitive network that will make high-speed telecommunications access available province-wide, at competitive urban rates, through a strategic alliance with the private sector (refer to Goal 1).

The SUPERNET strategy supports *Strengthening Relationships*–the Government of Alberta's Aboriginal Policy Initiative, *Get Ready Alberta*–the province's Economic Development Strategy, and the other cross ministry initiatives.

Measures continued

Common Platform and Tools

An enterprise architecture that will enable the electronic delivery of government services, by providing a corporate technology framework.

	Percentage Completion				
Item	**1999-2000 Actual**	**2000-01 Target**	**2001-02 Target**	**2002-03 Target**	**2003-04 Target**
Degree of departmental support and participation in the launch of an ongoing Government of Alberta Enterprise Architecture program	25	50	100	*	*
Enterprise Standards Management Process**	75	100	100	100	100
Design of a Distributed Computer Support Model	25	50	100	100	100
Desktop Standards					
• E-Mail	not available	85	100	100	100
• Hardware Baseline	not available	50	80	90	90
• Common Software Configuration (Edit, Calendar, Browsers, etc.)	not available	85	90	95	100
• Web component Standards	not available	75	90	100	100
Process Standards					
Data Standards	not available	80	90	95	95
Security					
• Government-Wide Security Policies	not available	80	100	100	100
• Virus Protection Standards	not available	80	100	100	100
• Network Protection Standards	not available	80	100	100	100
• Active Protection/Alerts Standards	not available	50	85	100	100
	Percentage Reduction				
Server Optimization (% reduction)***	not available	0	20	30	50

Source: Innovation and Science, Office of the CIO

* Formal measures of the Government of Alberta Enterprise Architecture program are being established and will appear in the 2002-05 business plan.

** Through the Standards Management Process, a cross government committee will recommend standards and/or common tools for adoption by all departments. Innovation and Science will lead the process, with targets indicating cross ministry adoption of standards or common tool sets.

*** Server Optimization encompasses centralizing servers in fewer locations, physically consolidating functions on to fewer machines, consolidating data on to shared storage, and reducing the number of supported server architectures.

CORE BUSINESS: MINISTRY OPERATING EFFECTIVENESS

GOAL 6: EFFECTIVELY MANAGE HUMAN CAPITAL WITHIN THE MINISTRY OF INNOVATION AND SCIENCE.

The Corporate Human Resource Development Strategy is a key cross ministry initiative. The overall goal of this strategy is to respond to demographic pressures, growing competition for scarce resources and rapidly changing skill needs. Goal 6 and its strategies identify the contributions from Innovation and Science to the Corporate Human Resource Development Strategy.

STRATEGIES

- Maintain and enhance staff skill, talent and understanding of science and innovation.
- Develop:
  - competency requirements for employees,
  - policy regarding employee development/training (including targets), and leadership continuity.
- Continue to implement the Corporate Human Resource Development Strategy within Innovation and Science.
- Continue to promote co-op and internship programs.
- Develop and implement a plan to ensure a positive work environment for employees including opportunities for development.

KEY PERFORMANCE MEASURES

Measure

GOVERNMENT SURVEY OF INNOVATION AND SCIENCE EMPLOYEES

	1999-2000 Baseline	2000-01 Actual	2001-2002 Target
Percentage of employees who know how their work contributes to the achievement of the Innovation and Science business plan	84	77	85
Percentage of employees who are satisfied with their employment at Innovation and Science/Government of Alberta	83	88	85
Percentage of employees who agree that Innovation and Science provides the support they need to acquire or develop knowledge and skills in their current job	83	86	85
Percentage of employees who agree that they have the skills and knowledge to meet the anticipated requirements of their job over the next three years	76	81	85
Percentage of employees indicating that their organization provides expected outcomes for their work*	66	68	85
Percentage of employees indicating that their organization helps them know and understand how well they are performing*	77	69	85

Source: Government of Alberta, ***Topline Frequencies of the Results of the 2000 Core Human Resources Measures Survey (December 11, 2000).***

* Survey question added to the 2001-2004 Business Plan

INDICATORS FOR SCIENCE, RESEARCH AND TECHNOLOGY – THE ALBERTA ADVANTAGE

The ability to create, distribute and exploit knowledge and information seems ever more important and is often regarded as the single most important factor underlying economic growth and improvements in the quality of life.

OECD Science, Technology and Industry Scoreboard, 1999

Monitoring a variety of indicators can help develop a composite picture of how Alberta is doing in comparison to other provinces, Canada, and other countries around the world. Because this information is not always comparable, and in some cases, not very timely, it is presented here for information only. By studying these indicators over time, Innovation and Science plans to develop better performance measures and establish benchmarks for the Ministry. Results for these indicators will be reported on in upcoming annual reports for Innovation and Science.

INDICATORS

Scientists, engineers, technologists and technicians as a percentage of the labour force (and comparisons of Alberta to BC, Ontario and Canada)

Total Sponsored Research Funding (overall and by source)
The ability of universities and teaching hospitals to attract research funding is an indicator of the quality of their faculty and their research programs.

R&D Investment
In an "innovation-based economy", investment in science and R&D is the primary driver of business growth and success. Target (as identified in *Get Ready Alberta*): $2 billion total R&D investment from the province, federal government and business by 2005.

Business Innovation
Alberta business use of the Internet to sell goods and services compared to that of the rest of Canada and the world as an indicator of innovation and the development of commercially viable products, processes and services.

Community Involvement – Use of SUPERNET
Through the SUPERNET, we will make high-speed network and Internet access available, province-wide, at competitive urban rates within three years. In every community with at least one learning institution or health facility, high-speed access will be available to the public and to businesses at competitive urban rates. A program will be implemented to ensure that maximum benefits are achieved from the infrastructure that is being put in place.

NUMBER OF ALBERTA COMMUNITIES USING HIGH-SPEED INTERNET

Number of Communities where:	2000 Estimate*	2001 Target	2002 Target	2003 Target	2004 Target
Residences are using high-speed internet access	30	30	50	200	422
Businesses/other are using high-speed services	not available	not available	50	150	250

*2000 Estimate based on information acquired from a variety of Internet service providers throughout Alberta.

Research Investment

Growing Alberta's innovation-based economy is a challenging but achievable objective. In an innovation-based economy, investment in science and R&D is the primary driver of business growth and success.

This new indicator is under development. It will show research investment by ASRA and associated matching funding from other levels of government and the private sector over time in the three priority areas: life sciences, ICT and energy.

Expense by Core Business

(thousands of dollars)

	Comparable 1999-2000 Actual	Comparable 2000-01 Budget	Comparable 2000-01 Prelim. Actual	2001-02 Estimates	2002-03 Target	2003-04 Target
EXPENSE						
Core Business						
Science, Research and Development	132,559	144,829	142,901	146,874	149,919	158,565
Government Information Technology	62,130	76,421	66,701	99,621	164,752	88,592
MINISTRY EXPENSE	194,689	221,250	209,602	246,495	314,671	247,157

Ministry Statement of Operations

(thousands of dollars)

	Comparable 1999-2000 Actual	Comparable 2000-01 Budget	Comparable 2000-01 Prelim. Actual	2001-02 Estimates	2002-03 Target	2003-04 Target
REVENUE						
Internal Government Transfers	40,928	40,832	40,832	90,838	152,644	79,044
Transfers from Government of Canada	279	1,625	2,440	1,125	1,000	1,000
Investment Income	378	190	630	390	340	340
Other Revenue	52,938	69,482	59,715	52,459	57,900	63,989
MINISTRY REVENUE	94,523	112,129	103,617	144,812	211,884	144,373
EXPENSE						
Program						
Alberta Science and Research Authority (ASRA)						
Alberta Agricultural Research Institute	10,387	8,755	8,582	8,900	8,875	8,875
Alberta Energy Research Institute	7,288	5,540	7,370	8,900	6,940	6,940
Alberta Forestry Research Institute	1,080	1,251	1,400	1,450	1,257	1,257
Alberta Research Council Inc.	54,184	63,441	57,519	68,023	73,077	81,494
iCORE Inc. (Informatics Circle of Research Excellence)	855	10,000	10,000	10,000	10,000	10,000
Research Investments Program	40,622	29,600	25,000	25,000	30,000	30,000
Strategic Research Initiatives	4,940	12,250	19,073	10,897	5,725	5,725
Research Excellence Envelope	5,500	3,500	3,500	3,500	3,500	3,500
Technology Commercialization Initiatives	1,354	2,675	2,675	2,350	2,175	2,175
Operations and Policy Development	4,063	5,697	5,697	5,664	6,180	6,344
Office of the Chief Information Officer	1,529	1,810	1,610	1,820	1,820	1,870
Information Technology Services	58,350	72,526	62,671	45,656	48,987	46,312
Alberta SUPERNET	-	-	-	50,000	111,800	38,200
Ministry Support Services	4,537	4,205	4,205	4,335	4,335	4,465
Valuation Adjustments and Other Provisions	-	-	300	-	-	-
MINISTRY EXPENSE	194,689	221,250	209,602	246,495	314,671	247,157
Gain (Loss) on Disposal of Capital Assets	(583)	-	-	-	-	-
Write Down of Capital Assets	(476)	-	-	-	-	-
NET OPERATING RESULT	(101,225)	(109,121)	(105,985)	(101,683)	(102,787)	(102,784)

Consolidated Net Operating Result

(thousands of dollars)

	Comparable 1999-2000 Actual	Comparable 2000-01 Budget	Comparable 2000-01 Prelim. Actual	2001-02 Estimates	2002-03 Target	2003-04 Target
Ministry Revenue	94,523	112,129	103,617	144,812	211,884	144,373
Inter-ministry consolidation adjustments	(66,236)	(76,837)	(70,512)	(105,331)	(171,110)	(95,916)
Consolidated Revenue	28,287	35,292	33,105	39,481	40,774	48,457
Ministry Program Expense	194,689	221,250	209,602	246,495	314,671	247,157
Inter-ministry consolidation adjustments	(25,308)	(36,005)	(29,680)	(14,493)	(18,466)	(16,872)
Consolidated Program Expense	**169,381**	**185,245**	**179,922**	**232,002**	**296,205**	**230,285**
Gain (Loss) on Disposal of Capital Assets	(583)	-	-	-	-	-
Write Down of Capital Assets	(476)	-	-	-	-	-
CONSOLIDATED NET OPERATING RESULT	(142,153)	(149,953)	(146,817)	(192,521)	(255,431)	(181,828)